rsons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute of form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT					Complete if Known
			EMENT BY	Application Number	Unknown 10/634 570
				Filing Date	August 5, 2003
•				First Name Inventor	Vito R. Gervasi
·				Group Art Unit	1732 1772
(use as many sheets as necessary)				Examiner Name	Leo B. Tentoni Pattorson
Sheet	1	of	2	Attorney Docket Number	66182-9020-02

	U.S.	PATENT DOCUMENTS	
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
cs	4,844,144	Murphy et al.	7/4/1989
cs	5,109,589	Cramer et al.	5/5/1992
. cs	5,256,340	Allison et al.	10/26/1993
cs	5,418,112	Mirle et al.	5/23/1995
CS	5,439,622	Penisi et al.	8/8/1995
cs	5,482,659	Sauerhoefer	1/9/1996
cs	5,735,336	Oti	4/7/1998
CS	5,775,402	Sachs et al.	7/7/1998
cs	5,824,260	Sauerhoefer	10/20/1998
CS .	6,193,923	Leyden et al.	2/27/2001
	_	<del></del>	
		·	<del> </del>
<del></del>	<del></del>	<del>-   </del>	

Examiner	10-12	Date	
Signature	/Catherine Simone/	Considered	06/22/2006
l	l	L	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.				
Substitute of form 1449/PTO		Complete if Known .		
RMATION DISCLOSURE STATEMENT BY	Application Number	Unknown 10/634,570		
APPLICANT	Filing Date	August 5, 2003		

Subst	itute of 101111 1449/	rio			Complete it renown	
INFORMAT	TION DISCLO	SURE STAT	EMENT BY	Application Number	Unknown 10/634.570	
APPLICANT				Filing Date	August 5, 2003	
•			•	First Name Inventor	Vito R. Gervasi	
				Group Art Unit	0732 17720	
(use as many sheets as necessary)				Examiner Name	Leo B. Tentoni Fatterson	
Sheet	2	of	2	Attorney Docket Number	66182-9020-02	

U.S. PATENT DOCUMENTS			
Examiner   Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
cs_	EP	0 484 183		5/6/1992		
cs	EP	0 590 597		4/6/1994		
cs	ЕР	0 649 691		4/26/1995		
	<del></del>					,
			·			

	<u> </u>	1	<u> </u>
Examiner	/Catherine Simone/	Date	·
Signature	/ Catherine Simone/	Considered	06/22/2006

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Leo B. Tentoni

66182-9020-02

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

On persons are required to respond to a collection of information unless it contains a valid OMB number.

Lower Information Unless it contains a valid OMB number.

Application Number

Unknown

101634570

Filting Date

August 5, 2003

First Named Inventor

Vito R. Gervasi

Group Art Unit

1732

Examiner Name

Attorney Docket Number

4

(use as many sheets as necessary)

Sheet

	·
	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
cs	VITO R. GERVASI, LISA M. MILKOWSKI, JAMES V. CANINO and REBECCA J. ZICK, MSOE TetraLattice, Applications and Simplified CAD Representations, Rapid Prototyping Center, Milwaukee School of Engineering, Milwaukee, Wisconsin.
	VITO R. GERVASI, DR. DANIEL A. BRANDT, STEVEN D. SHAFFER and KING LIM, Tetracast SLA Build Style, The 7 <sup>th</sup> International Conference on Rapid Prototyping, 08-01-97.
	VITO R. GERVASI, Net Shape Composites Using SLA Tetracast Patterns, Rapid Prototyping Center, Milwaukee School of Engineering, 08-97.
	DON KLOSTERMAN, RICHARD CHARTOFF, NORA OSBORNE, GEORGE GRAVES, ALLAN LIGHTMAN, GYOOWAN HAN, Laminated Object Manufacturing (LOM) of Advanced Ceramics and Composites, 08-01-97, pp. 43-50.
	DON KLOSTERMAN, BRIAN PRIORE and RICHARD CHARTOFF, Laminated Object Manufacturing of Polymer Matrix Composites, 08-01-97, pp. 283-292, Ohio Rapid Prototyping Process Development Consortium, Dayton Ohio.
	Fiber/Resin Composite Manufacturing Using Stereolithography, Rapid Prototyping Report, 08-92, pp. 5-6, Volume 2, Number 8, CAD/CAM Publishing, Inc.
	AMIT BAGCHI and ROBERT BEESLEY, Multi-Layered Composites Using Photolithography Solid Freeform Fabrication Symposium Proceedings, 1994, pp. 234-241.
	R. CHARAN and A. BAGCHI, Fabrication of Composite Prototypes by 3-D Photolithography, The 4 <sup>th</sup> International Conference on Rapid Prototyping, 1993, pp. 15-23.
$\downarrow$	R. CHARAN, T. RENAULT, A.A. OGALE and A. BAGCHI, Automated Fiber Reinforced Composite Prototypes, The 4 <sup>th</sup> International Conference on Rapid Prototyping, 1993, pp. 91-97.

Examiner		Date	
Signature	/Catherine Simone/	Considered	06/22/2006

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO/SB/08B

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO

Application Number

Unknown

10634.570

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(use as many sheets as necessary)

of

Sheet

Complete if Known				
Application Number	Unknown 10/634.570			
Filing Date	August 5, 2003			
First Named Inventor	Vito R. Gervasi			
Group Art Unit	9732 17720			
Examiner Name	Leo B. Tentoni Dy Jon			
Attorney Docket Number	66182-9020-02			

· · · · · · · · · · · · · · · · · · ·	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials .	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.					
cs	A. SAFARI, S.C. DANFORTH, R.K. PANDA, T.F. McNULTY, F. MOHAMMADI and A. BANDYOPADHYAY, Fabrication of Piezoelectric Ceramics and Composites Using Rapid Prototyping Techniques, The 7 <sup>th</sup> International Conference on Rapid Prototyping, 08-01-97, pp. 34-42.					
	RAYMOND CHANG, Chemistry, Third Edition, 1988, pgs. 422-423, McGraw-Hill Publishing Company.					
	http://www.webworqs.com/design/nomura/quick.html (undated).					
	http://www.protogenic.com/MetalParts.html (undated).					
	http://www.protogenic.com/Stereolith.html (undated).					
	http://www.msoe.edu/rpc/sla.htm (undated).					
	The Selective Laser Sintering Process Third-Generation Desk Top Manufacturing, DTM Corporation, Austin, TX (undated).					
	SCOTT HILL, Selective Laser Sintering: Understanding and Applying the Technology, 10-23-90, Presented to: The First National Conference on Desktop Manufacturing, Cambridge, MA.					
$\sqrt{}$	Rapid Prototyping Systems, The Solider Solution for Prototyping and Manufacturing, 1-11-92, Cubital Ltd.					

Examiner		Date	
Signature	/Catherine Simone/	Considered	06/22/2006

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO			•	Complete if Known			
			,	Application Number	Unknown 10/634.570		
INFOR	MATION	N DISCL	OSURE	Filing Date	August 5, 2003		
STATE	EMENT B	Y APPL	ICANT	First Named Inventor	Vito R. Gervasi		
				Group Art Unit	1732 1772		
	(use as many she	ets as necessary)		Examiner Name	Leo B. Tentoni Pallesson		
Sheet	3 ·	of .	4	Attorney Docket Number	66182-9020-02		

			OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials			Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	.CS		Preliminary Product Data, Cibatool SL, XB 5170, 3D Systems, Inc. (undated).
			Cibatool SL 5180, 3D Systems, Inc., Ciba-Geigy Corporation, 1994.
			SLS Model 125, DTM Corporation, Austin, TX, 1989.
			DR. PAUL JACOBS, Stereolithography 1993: Epoxy Resins, Improved Accuracy & Investment Casting, 3D Systems, Inc., Valencia, CA.
			DR. ADRIAN SCHULTHESS, New Resin Developments for Stereolithography, Rapid Prototyping and Manufacturing Conference '94, 4-26-94.
			WILLIAM E. BOYES, Low Cost Jigs Fixtures & Gauges for Limited Production, Chapter 10, Plastic Tool Construction, Society of Manufacturing Engineers, pp. 157-183, (undated).
		:	Application Brief, Nylon Material Properties, DTM Corporation (undated).
			JIM TOBIN, CHRIS SCHNEIDER, BOB PENNISI and STEVE HUNT, Rapid Stereolithography Molds, 5-15-92, vol. 15, p. 38, Motorola Inc. Technical Developments.
1	/		V.R. GERVASI and R.S. CROCKETT, Composites With Gradient Properties From Solid Freeform Fabrication, Rapid Prototyping Center, 8-10-98, pp. 729-735, Milwaukee School of Engineering, Solid Freeform Fabrication Symposium.

Examiner		Date	
Signature	/Catherine Simone/	Considered	06/22/2006

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO/SB/08B

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO			Complete if Known				
	•			Application Number	Unknown	10/634,570	
INFOR	MATION	N DISCL	OSURE	Fiting Date	August 5, 2003		
STATE	EMENT E	BY APPL	<b>ICANT</b>	First Named Inventor	Vito R. Gervasi	10-	
				Group Art Unit	1732	1700	
	(use as many she	etș as necessary)	)	Examiner Name	Leo B. Tentoni	fallosson	
Sheet	4	of	4	Attorney Docket Number	66182-9020-02		

			OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Exar Init			Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
cs			ERIC FODRAN, MARTIN KOCH and UNNY MENON, Mechanical and Dimensional Characteristics of Fused Deposition Modeling Build Styles, 08-12-96, pp. 419-442, Solid Freeform Fabrication Symposium.
			RICHARD HAGUE and PHILL DICKENS, Finite Element Analysis & Strain Gauging of the Stereolithography/Investment Casting System, 8-12-96, pp. 523-537, Solid Freeform Fabrication Symposium.
			WENLONG ALBERT YAO, HARMEAN WONG and MING C. LEU, Analysis of Termal Stresses in Investment Casting with Epoxy Pattersn, 1996, North American Stereolithography User's Group Conference.
		·	Phidias: Laser Photopolymerisation Models Based on Medical Imaging, a Development Improving the Accuracy of Surgery, 1996, North American Stereolithography User's Group Conference, Materialise NV, Belgium.
\			RICHARD HAGUE and PHILL DICKENS, Design of New Build Structures for the Successful Autoclaving of Stereolithography Models, 8-97, pp. 192-202, International Conference on Rapid Prototyping.

Examiner		Date	
Signature	'/Catherine Simone/	Considered	06/22/2006

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

## This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:
BLACK BORDERS
☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
☐ FADED TEXT OR DRAWING
☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
☐ SKEWED/SLANTED IMAGES
☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
☐ GRAY SCALE DOCUMENTS
☐ LINES OR MARKS ON ORIGINAL DOCUMENT
☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
□ other:

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.